COGNITIVE BIAS IN DECISION-MAKING

A medical case study

Introduction

This case study explores how cognitive biases can influence decision-making, even among experienced professionals. We will examine the cognitive processes at play and how they can lead to errors in judgment. Consider the following case and reflect on the questions at the end.

The Case Study: Dr. Lisa's Diagnosis

Dr. Lisa, a seasoned physician, recently completed an intensive course on rare autoimmune disorders. One condition, in particular, stood out to her: **Neuromuscular Autoimmune Syndrome (NMAS)**, a disease with subtle and varied initial symptoms. A few weeks later, a patient named Mr. Jones presented with fatigue, muscle weakness, and intermittent tingling in his extremities. Dr. Lisa immediately recalled NMAS.

Because of the course, **NMAS was easily accessible in her memory** and she had recently primed her brain to recognise the condition. The **availability heuristic** was triggered, causing her to overestimate the likelihood of NMAS. She began to **selectively attend** to the aspects of Mr. Jones's case that aligned with NMAS, such as the muscle weakness and fatigue. She even subtly steered the conversation to elicit more information that supported her initial hypothesis.

While Mr. Jones also mentioned experiencing frequent headaches and digestive issues, symptoms not typically associated with NMAS, Dr. Lisa **downplayed these**, attributing them to stress. She **categorized** Mr. Jones's symptoms based on her recent learning, fitting them into the NMAS framework. Despite the fact that several other conditions could also explain Mr. Jones's symptoms, she ordered tests specifically designed to confirm NMAS, actively seeking information that would validate her initial diagnosis. When the initial test results came back inconclusive, Dr. Lisa ordered further, more specialized tests to confirm the presence of NMAS. It turned out that Mr. Jones was suffering from a vitamin deficiency causing similar symptoms. Dr. Lisa's early diagnosis delayed the correct diagnosis and treatment.

Reflection Questions

Consider the following questions based on the case study:

1. What cognitive processes did Dr. Lisa use in making her diagnosis?
2. How did these processes lead to confirmation bias?
3. How could Dr. Lisa have avoided this bias in her diagnostic process?

Summary

This case study illustrates how normal cognitive processes, such as memory retrieval, selective attention, and categorization, can contribute to cognitive biases like confirmation bias. By understanding these processes, professionals can take steps to mitigate their influence and improve their decision-making accuracy.